

WHAT IS CLAIMED IS:

1. A composite core nonlinear reactor comprising:
 - a first core member made of a
5 high-magnetic-permeability material and forming a
continuous annular magnetic path;
 - a second core member made of a
high-magnetic-permeability material and forming an
annular magnetic path locally broken by an interstice;
 - 10 a magnetic shielding plate made of a
low-magnetic-permeability material having high electric
conductivity and high heat conductivity, integrally
sandwiched between the first core member and the second
core member; and
 - 15 a coil,wherein the annular magnetic path of the first core
member and the annular magnetic path of the second core
member are juxtaposed sandwiching the magnetic shielding
plate, the coil being wound such that the coil commonly
20 crosses consecutively both of the annular magnetic paths.
2. A composite core nonlinear reactor according to claim
1, wherein the magnetic shielding plate is joined
integrally to the outer surfaces of both the first core
25 member and the second core member.
3. A composite core nonlinear reactor comprising:

two first core members made of a high-magnetic-permeability material and each forming a continuous annular magnetic path;

5 a second core member made of a high-magnetic-permeability material and forming an annular magnetic path locally broken by an interstice;

two magnetic shielding plates made of a low-magnetic-permeability material having high electric conductivity and high heat conductivity, positioned on 10 each side of the second core member respectively, each of the two magnetic shielding plates being integrally sandwiched between the first core members and the second core member, respectively; and

a coil,

15 wherein the annular magnetic path of each of the two first core members and the annular magnetic path of the second core member are juxtaposed in a triple-in-line formation sandwiching the two magnetic shielding plates, the coil being wound such that the coil commonly crosses 20 consecutively the triple-in-line annular magnetic paths.

4. A composite core nonlinear reactor according to claim 3, wherein the magnetic shielding plate is joined integrally to each of the outer surfaces of the two first 25 core members.

5. A composite core nonlinear reactor according to any

one of claims 1 to 4, wherein the magnetic shielding plate is provided integrally with a heat dissipation fin portion having a geometry that extrudes and spreads out of geometries of the first core member and the second core member.

6. A composite core nonlinear reactor according to any one of claims 1 to 5, wherein the magnetic shielding plate and the core members are joined together in an electrically insulated manner.

7. An induction incoming circuit for supplying electric power from a resonance circuit to a load, comprising:
a receiving coil placed in an alternating field at a predetermined frequency and for generating an induced electromotive force; and

a resonance capacitor connected with the receiving coil and forming a resonance circuit tuned to the frequency of the magnetic field,

wherein the coil of the composite core nonlinear reactor according to any one of claims 1 to 6 is connected in parallel to the resonance capacitor.